



Michigan Department of Agriculture

Environmental Stewardship Division

Annual Report 2005

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The Environmental Stewardship Division (ESD) administers the Michigan Department of Agriculture's (MDA) many programs that encourage environmentally sound agricultural practices and prevent agriculture-related pollution. ESD seeks to enhance commercial agriculture activities in Michigan, while protecting the environment and public health.

Biosolids Land Application Program

The Michigan Department of Agriculture's role in the Michigan Biosolids Program is to provide education and technical assistance to individuals involved with or affected by the land application of biosolids. The law, which is administered by the Michigan Department of Environmental Quality, allows wastewater treatment facilities the option to safely recycle biosolids to crop land as a nutrient source. The MDA delivers education and technical assistance by providing a quarterly newsletter, a Q & A brochure, and a weekly information page to Conservation Districts. MDA also partners with the Michigan Department of Environmental Quality, Michigan State University Extension, and the Michigan Water Environment Association to provide education to farmers, wastewater technicians, and township officials. Over 91,000 dry tons of biosolids have been applied to over 20,000 acres of Michigan crop land, which equates to \$8.5 million saved by farmers using biosolids instead of commercial fertilizers.

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP) was created to help protect Michigan's environment and wildlife. The State of Michigan is partnering with the federal government, other agencies, private and public conservation organizations and institutions, to implement conservation practices of great significance to the state and nation, in matters of soil erosion, water quality and wildlife habitat.

- CREP targets non-point source pollution.
- CREP includes agricultural-related acreage in Saginaw Bay, River Raisin and Macatawa watersheds covering all or parts of 29 counties.
- CREP objectives include enrolling 80,000 acres into conservation, promoting use of native species, leveraging federal match dollars, reducing transport of phosphorus, nitrates and pesticides into soil and ground and surface water.
- CREP accomplishments include farmers and landowners enrolling over 62,000 acres in the program. This includes 36,700 acres of corridor practices or 3,000 miles of 100 foot-wide vegetative filters, 2,170 acres of wetland restoration practices, and 9,446 acres of conservation on highly erodible cropland.



Planting conservation grass, trees and shrubs reduce wind and water erosion and improve water quality.



Farmland and Open Space Preservation Program

The Farmland and Open Space Preservation Program involves the administration of several program areas including the Farmland Preservation Program (commonly known as PA 116); the Michigan Agricultural Preservation Fund; the state purchase and donation of development rights; the designated open space easement program; and the local open space easement program. MDA issued the first grants to local purchase of development rights programs in 2005.

2005 Accomplishments:

- 249 new agreements were secured in the program accounting for an additional 19,900 acres enrolled in the Farmland and Open Space Preservation Program.
- Purchase the development rights on more than 1,000 acres with the assistance of federal matching funds.
- Over 1,900 agreements were renewed totaling more than 153,520 acres.



We protect more than 3,320,000 acres of farmland and open space.

Forestry Assistance Program

The purpose of the Forestry Assistance Program is to assist Conservation Districts in their efforts to help Michigan citizens better understand, plan, manage, protect and utilize their forest resources. There are nearly 200,000 acres of land affected and nearly 35,000 landowners participating in the program.

2005 Accomplishments:

- Foresters assisted landowners with proper forest management to harvest nearly \$9.0 million of timber on 27,436 acres.
- Landowners, with the help of the Conservation District foresters planted 5,854 acres of trees.
- The harvesting and planting of trees sequestered 5,827,482 lbs. of carbon. Forestry assistance staff worked with 879 urban and suburban landowners and 442 local units of government on 22,839 acres.
- The foresters conducted 324 public meetings with an attendance of 17,393 people. The foresters met 349 times with both public and private foresters to discuss issues.
- Foresters wrote hundreds of forest management plans for landowners ranging from the very simple (tree cutting) to the very complex (managing 20,000 acre forest).



Conservation District foresters provide educational and technical assistance to landowners.

Groundwater Monitoring Program

The Groundwater Monitoring Program samples private wells across the state for general chemistry, pesticides, and volatile organic compounds to meet state and federal program objectives. Well sampling under the program is designed to meet specific information needs. Monitoring is also carried out to help MDA and cooperators develop and share information on risks posed by various pesticide and nitrogen fertilizer use practices.

The Groundwater Monitoring Program supports the U.S. Environmental Protection Act required State Management Plan process by providing data on private drinking water well quality to retain pesticide product registrations where those products can be used without negative impacts on groundwater quality.

The program provides data on nitrate and pesticide concentrations to well users, investigates the nature and extent of pesticide contamination at contaminated sites, coordinates information on potential health impacts from the use of contaminated water supplies, and provides alternate water supplies including well replacement, for private well owners with pesticide levels above public drinking water standards. The monitoring program has screened over 18,500 wells for atrazine and nitrate contamination since 1997. The data has allowed the program to identify several factors in Michigan associated with nitrate contamination, and to alert residents using contaminated water of possible risks. Since tracking the number of pregnant women that live in households represented by the water samples, screening has identified 22 households with pregnant women or infants drinking water with elevated nitrate levels, a known health risk for both.



Well sampling provides homeowners with the information on the quality of their drinking water.

The program collected 192 sample sets from 158 wells in 2005. This includes confirmation samples from two wells, periodic monitoring on five wells known to be contaminated or close to contaminated wells, and envelope monitoring of five wells near contaminated sites. MDA staff also screened nearly 2,500 samples at three well water screening events in 2005. Results are mailed to all participants and include recommendations on dealing with contaminated wells and additional sources of information.

Intercounty Drain Program

Staff provides oversight for all intercounty drain projects and serves as chair of the intercounty drain board. The program administered 33 intercounty drain petitioned projects with an estimated cost of \$10.8 million. A total of 237,659 acres were served by these projects affecting 82 miles of drains. Responded to 195 drain maintenance requests in 45 different counties, improving approximately 560 miles of drains serving almost 434,188 acres at a cost of over \$1.4 million for a total project cost of \$11.96 million. All project cost is derived from special assessments on private lands and public corporations and monies from the Clean Michigan Initiative.



The \$3.3 million Sebewaing River project.

Michigan Agriculture Environmental Assurance Program

The Michigan Agriculture Environmental Assurance Program (MAEAP) develops and promotes a recognized, voluntary and proactive environmental assurance program targeted at Michigan's agriculture industry. MAEAP ensures that producers are using cost-effective pollution prevention practices and are in compliance with applicable environmental regulations and in conformance with Michigan Right to Farm guidelines and U.S. Department of Agriculture, Natural Resources Conservation Service standards. The program has three systems (Livestock, Farmstead and Cropping) and incorporates farmer education, on-site risk assessments and third party verification.

MAEAP assures farmers have used effective tools for assessing and correcting environmental risks, and can help minimize enforcement penalties.

2005 Accomplishment:

- Over 1,400 at education sessions
- 550 small and medium sized livestock operations at various stages of operational improvements through progressive planning
- 121 verified farms



There are over 200 verified farms across the state.

The manure from over nine million animals was properly used on lands that have been individually inspected to eliminate environmental risk, and saved farms **\$5,824,711** in phosphorus and **\$16,738,063** in nitrogen fertilizer cost.

Michigan Conservation District Program



Michigan's Conservation Districts are "unique" local units of government that utilize local, state, federal and private sector resources to solve today's conservation problems. The guiding philosophy of all Conservation Districts is that decisions on conservation issues should be made at the **local level**, by **local people**. The Michigan Department of Agriculture Environmental Stewardship Division provides annual grants of \$19,200 to each Conservation District. This base funding allows Conservation Districts to leverage additional funding sources.

Michigan's Conservation Districts are a local source of education and technical assistance to the farming and non-farming public providing counsel and assistance on land and water stewardship and conservation. Conservation Districts offer a variety of staff based on county resource assessments, including but not limited to, Groundwater Technician, Forester, Wildlife Biologist, Michigan Agriculture Environmental Assurance Program Specialist, Conservation Reserve Enhancement Program Technician, Watershed Coordinator, Soil Erosion Technician, AmeriCorps Member, River Restoration Technician, Integrated Pest Management Technician, Education Coordinator, and Private Land Specialist.



Michigan Groundwater Stewardship Program Clean Sweep Program

The proper disposal of unused and unwanted pesticides is the goal of the Clean Sweep program in Michigan. The Michigan Groundwater Stewardship Program, in cooperation with federal, county and local units of government, has established 15 permanent Clean Sweep sites located throughout the state.

Michigan residents may dispose of unused and unwanted pesticides at one of these Clean Sweep sites. Pesticides at these sites are collected, packaged for shipping, and properly disposed. There is no charge for this service.



The program has collected over one million pounds of pesticides.

The program collected and properly disposed of 139,184 pounds of pesticides, including 172 pounds of lead arsenate, 132 pounds of DDT, 139 pounds of methoxychlor, 1,860 pounds of atrazine, and 70 pounds of Agent Orange. The program continues to collect persistent bioaccumulative toxins such as DDT, Agent Orange, and Chlordane.

Michigan Groundwater Stewardship Program On-Farm Technical Assistance

The Michigan Groundwater Stewardship Program is a legislatively enabled partnership designed to help individuals reduce the risks of groundwater contamination associated with pesticide and nitrogen fertilizer use. The program is funded through fees assessed on the sale of pesticides and nitrogen fertilizers.

Program sponsored educational, technical and financial assistance is available locally through Groundwater Technicians and the Groundwater Stewardship Team made up of concerned individuals and decision-makers. Groundwater stewardship practices are in conformance with Michigan Right-to-Farm guidelines and U.S. Department of Agriculture, Natural Resources Conservation Service standards, and in compliance with state and federal environmental regulations.

When a Farm*A*Syst is conducted, Groundwater Technicians work with farmers to identify environmental risks, create a plan to eliminate the risks and provide the technical assistance needed to implement the plan. More than 15,000 Farm*A*Syst evaluation tools have been completed reassuring the public that producers are using environmentally sound practices, and helping to foster positive community and neighbor relations.

Groundwater Technicians offer assistance to develop Farm Emergency Plans, providing farmers a plan to mitigate on-farm emergencies, and for emergency first-responders to know the location of on-farm hazardous materials. Groundwater Technicians also work with farmers to create Emergency Spill Kits, which provide a quick way to contain and clean-up spills of pesticides and fertilizers.



360 abandoned wells were decommissioned.

The new cropping assessment system (Crop*A*Syst) helps producers to develop and implement a management plan that prevents contamination of surface water and groundwater during production of commodities in the field.

2005 Accomplishments:

- 4,103 on-farm risk reductions (pesticide storage security, anti-backflow device installation, drift management plans, triennial water testing, pesticide container triple rinsing, etc.)
- 548 Farm*A*Systs and 151 Crop*A*Systs completed
- 80 plans written, including waste utilization plans, nutrient management plans, conservation crop rotation plans
- 158 Farm Emergency Plans implemented
- 335 Emergency Spill Kits created

Michigan Groundwater Stewardship Program Residential Program (AmeriCorps)



Groundwater education was provided to K-12 students across the state.

The Michigan Groundwater Stewardship Program is a legislatively enabled partnership effort designed to help individuals reduce the risks of groundwater contamination associated with pesticide and nitrogen fertilizer use. The program is funded through fees assessed on sales of pesticides and nitrogen fertilizers. AmeriCorps members provided groundwater education to more than 24,500 students and performed more than 20,500 risk assessments for homeowners or renters.

AmeriCorps is a national community service program in which participants provide community service to strengthen America. AmeriCorps is often referred to as the “domestic Peace Corps” as its members are national volunteers but perform their service

within the United States only. AmeriCorps members serve in conjunction with MDA’s Groundwater Stewardship Program to educate Michigan residents on what they can do as individuals to keep Michigan’s water resources clean.

Michigan Turfgrass Environmental Stewardship Program



Proper golf course practices can positively impact local water quality.

The Michigan Turfgrass Environmental Stewardship Program is dedicated to protecting groundwater and surface water resources by advancing turfgrass management practices, preventing pollution, and increasing regulatory compliance within the golf industry. The program represents a partnership among Michigan State University; the Michigan Department of Agriculture; the Michigan Environmental Quality; Michigan Turfgrass Foundation; Michigan Golf Course Owners Association; Golf Association of Michigan; and the four regional Golf Course Superintendents Associations. There are over 860 golf courses in Michigan ranking Michigan third nationally in total number of courses. 226 golf courses participate in the program. Travel Michigan estimates that golf in Michigan generates nearly \$1.0 billion to the state’s economy.

Migrant Labor Housing Program

Michigan's unique environment makes it possible to grow a variety of specialty crops. Thirty-seven commodities, ranging from fruits and vegetables to bedding plants and Christmas trees are labor intensive, hand-harvest dependent, and could not be produced without migrant farm laborers. Migrant Labor Housing is essential to keeping Michigan agriculture viable.

2005 Accomplishment:

- Inspected and licensed 808 housing sites in Michigan.
- Program staff conducted 1,060 inspections.
- A total of 3,940 living units were approved for occupancy, providing a capacity to house 22,401 people.
- The construction grant programs provided financial assistance to 33 farmers for projects that totaled \$1,105,800.



Michigan is a destination of choice for migrant laborers.

The Migrant Labor Housing Team was the 2005 recipient of the Michigan Agriculture Commission Award for Excellence. The team created manpower efficiencies by retooling inspection and licensing protocols and adjusting workloads. It pursued and was awarded a grant from the U.S. Department of Labor. Grant monies will enable housing providers matching grants to assist with construction costs. In addition, the team successfully pursued an amendment to the Public Health Code enabling the Department to assess fines when camps operate without a license.

Right to Farm Program

The Right to Farm program is designed to provide farmers with nuisance protection if the farm conforms to the Generally Accepted Agricultural Management Practices (GAAMPS) that apply to that farm operation. This is achieved by providing an avenue for Michigan citizens to express concerns about various farming practices or file a complaint about a farm operation or practice.

When a complaint is filed, program staff has seven business days to respond. An on-site inspection of the farm facility is typically conducted within four days of the complaint. Complaint investigations also include an interview of the complainant to discuss their concerns, report findings, and explain what changes may need to be made at the farm operation.



The program responded to 162 new environmental complaints and conducted an additional 134 follow up inspections. While half of the new complaints were not verified, changes in management practices were necessary for the other half. The management practices implemented on these farms included: 19,480 feet of stream bank protection by installation of fencing, 11 farms changed their management of runoff to protect sensitive areas, and several dairies made changes in how they handle milk house and parlor wastewater.



In addition, 21 farms that did not already have a written management plan developed Manure Management System Plans. These plans covered 15,132 animal units and 19,447 acres of crop land.

Right to Farm also involves site selection for new and expanding livestock facilities that provides both the farmer and the surrounding community with environmental assurance, social compatibility and sustainable farm operations. Thirty-five farms requested site verification and 25 have been completed. About two thirds are for expansions of dairy or swine farms, and more than half are for facilities with a total capacity of less than 1,000 animal units.

Water Use Reporting and Aquifer Protection Program

Water use reporting requires all agricultural withdraws of quantities greater than 100,000 gallons per day as required by law to report their use to the Michigan Department of Agriculture. Over 1,100 water users reported representing 317,203 acres.

This program responded to 10 complaints referred from the Department of Environmental Quality of low capacity residential wells being affected by high capacity irrigation wells. Of the 10 complaints, four of the complaints were resolved with water supplies being restored, three were referred back to the Department of Environmental Quality as not resolved and three were not verified.

Spill Response Program

The Michigan Groundwater Spill Response Program provides for the rapid, cost-effective clean-up and proper use or disposal of manure, pesticides and fertilizer.

MDA field staff members respond to incidents reported to the MDA Spill Hotline (800-405-0101) by emergency first responders, responsible parties, or other persons that observe an uncontrolled release. MDA field staff work with the responsible party to contain the spill. Once any immediate environmental concerns are abated, the responsible party is provided with advice how to best clean-up the spilled material. In nearly all situations, the spilled material is land applied at agronomic rates, avoiding costly landfill expenses.



Rapid response to farm spills is important to protecting surface and ground water

Staff successfully resolved 34 spills through Michigan.

